

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Re: Appeal to the Board of Patent Appeals and Interferences

In re Application of: David W. Johnson

Group Art Unit: 1772

Serial No.: 09/334,054

Examiner: Michael C. Miggins

Filed: June 15, 1999

Our Customer ID: 22827

For: Elastomeric Article with Fine Colloidal
 Silica Surface Treatment and Its Preparation
 Sir:

Our Account No.: 04-1403

Attorney Ref.: SSK-4 (SS-00303)

1. ☐ **NOTICE OF APPEAL:** Pursuant to 37 CFR 41.31, Applicant hereby appeals to the Board of Appeals from the decision dated ____ of the Examiner twice/finally rejecting claims ____.
2. ☒ **BRIEF** on appeal in this application pursuant to 37 CFR 41.37 is transmitted herewith (1 copy)
3. ☐ An **ORAL HEARING** is respectfully requested under 37 CFR 41.47 (due within two months after Examiner's Answer).
4. ☐ Reply Brief under 37 CFR 41.41(b) is transmitted herewith (1 copy).
5. ☐ "Small entity" verified statement filed: ☐ herewith ☐ previously.

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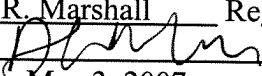
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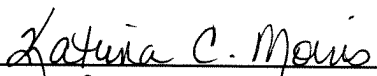
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PATENT
ATTORNEY DOCKET NO: SSK-4 (SS-00303)

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)		
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Mailstop Appeal Brief - Patents
Honorable Commissioner for Patents
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BRIEF ON APPEAL

Honorable Commissioner:

Appellant submits the following brief on appeal in accordance with 37 C.F.R. § 41.37:

1. REAL PARTY IN INTEREST

The real party in interest in this matter is the assignee of record, Kimberly-Clark Worldwide, Inc.

2. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to the Appellant or the Appellant's legal representative which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

3. STATUS OF CLAIMS

Currently, claims 1-10, 12, 13, 21, 31-32, and 34-36, including independent claims 1, 12, 13, and 31 are pending in the present application. All the pending claims are attached hereto in the Claims Appendix.

In the Final Office Action of Nov. 22, 2006, all of the pending claims were finally rejected under 35 U.S.C. §103(a).

4. STATUS OF AMENDMENTS

To the Appellant's knowledge, all amendments have been entered into the record.

5. SUMMARY OF CLAIMED SUBJECT MATTER

In general, the present application is directed to, a surface modified elastomeric article, such as a glove. According to the present application, the surface friction of the outside surface of the glove is increased without modifying the basic physical structure of the article. Pg. 2, lines 15-21. In some embodiments, the surface modification of the article can also be made to increase the dissipation of static electrical charge, reducing the incidence of damage due to such static electrical charges. Pg. 2, line 28 – Pg. 3, line 1.

For example, independent claim 1 is directed to a surface modified glove comprising an elastomeric material in the shape of a glove that receives a human hand therein. See, e.g., Fig. 1 and Pg. 3, lines 14-18. The matrix has an inside surface for contact with a human hand received within the glove and an outside surface. See, e.g., Fig. 1. A plurality of colloidal silica particles are adhered to at least a portion of the outside surface of the matrix and partially embedded therein without extending through

the thickness of the matrix. See, e.g., Pg. 3, lines 4-13 and Pg. 5, lines 3-4. There is no separate binder material affixing the colloidal silica particles to the outside surface.

See, e.g., Pg. 8, line 28 – Pg. 9, line 22.

Claim 8 is dependent upon claim 1 and requires that the colloidal silica particles further comprise a layer of electrically conducted material on the surface. See, e.g., Pg. 3, lines 19-28. Dependent claim 9 further requires that the colloidal silica particles further comprise a layer of aluminum chlorohydrate on the surface. See, e.g., Pg. 7, line 29 – Pg. 8, line 4.

Independent claim 12 is directed to a surface modified glove having an elastomeric matrix with an outer surface. See, e.g., Pg. 6, lines 4-5. A plurality of colloidal silica particles are adhered to at least a portion of the outside surface of the matrix without any separate binder material. See, e.g., Pg. 6, lines 11-13. The particles are partially embedded in the outside surface without extending through the thickness of the matrix. See, e.g., Pg. 7, lines 17-18. In addition, independent claim 13 and dependent claim 21 requires that the colloidal silica particles are electrically conductive. See, e.g., Pg. 7, line 27 – Pg. 8, line 4.

Finally, independent claim 31 is directed to a surface modified glove having an elastomeric matrix in the shape of a glove adapted to receive a human hand. See, e.g., Fig. 1. The elastomeric matrix has an inside surface for contact with a human hand received within the glove and an outside surface. See, e.g., Pg. 3, lines 4-13. A surface treatment is adhered to at least a portion of the outside surface of the glove, and has a plurality of colloidal silica particles adhered to and partially embedded in the outside surface of the glove. See, e.g., Pg. 3, lines 4-13. The silica particles are

electrically conductive. See, e.g., Pg. 3, lines 19-28. Dependent claim 34 further requires that the silica particles further comprise a layer of aluminum chlorohydrate on the surface thereon. See, e.g., Pg. 7, line 29 – Pg. 8, line 4.

6. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

- I. Whether independent claims 1, 12, 13, and 31, and their respective dependent claims, are obvious under 35 U.S.C. § 103(a) in view of the English title of CS 9005117 (hereinafter "CS '117") in combination with U.S. Pat. No. 5,620,773 to Nash, et al.
- II. Whether independent claims 13 and 31, along with dependent claims 8, 21, 32, and 34-36 are obvious under 35 U.S.C. § 103(a) in view of the CS '117 in combination with Nash, et al.
- III. Whether claims 9 and 34 are patentable over CS '117 in view of Nash, et al. and in further view of Korklan, et al.

7. ARGUMENT

Appellant respectfully submits that the presently pending claims are patentable over the cited references. As discussed above, all of the pending claims were rejected under 35 U.S.C. § 103 (a) at least in view of CS '117 in combination with Nash, et al.

The title of CS '117 reads as follows, "Thin protective gloves are made of natural or synthetic rubber, coated internally with styrene! (sic) acrylate! (sic) copolymer and externally with colloidal silica."

Nash, et al. is directed to securely embedding silica particles in the inside surface layer or donning layer of a glove. Col. 3, lines 18-20. The particles are embedded in the donning layer of the glove to provide a texturized surface which prevents blocking

(i.e. prevents the gloves from sticking together) and provides a glove that is suitable for donning without the use of a lubricant such as powder. Col. 2, lines 58-61 and Col. 3, lines 26-30.

I. Independent claims 1, 12, 13, and 31 are patentable over CS '117 in combination with Nash, et al.

As admitted by the Office Action, the title of CS '117 fails to disclose several aspects of independent claim 1. For example, the title of CS '117 does not disclose that the colloidal silica particles are adhered to at least a portion of the outside surface of the matrix and partially embedded therein without extending through the thickness of the matrix. As such, the Office Action combines the teachings of Nash, et al. stating that it would be obvious to provide "that the colloidal [silica] is embedded in the surface, ... in order to provide improved strength upon curing the glove." Office Action of May 23, 2006, pg. 3, lines 8-11.

A. No suggestion or motivation exists to combine the teachings of CS '117 with those of Nash, et al.

Appellant respectfully submits that no suggestion or motivation exists to combine the cited references as attempted by the Office Action. As explained by the Federal Circuit, obviousness may only be established by modifying the teachings of the prior art to produce the claimed invention if there is some teaching, suggestion, or motivation to do so found either in the reference itself or in the knowledge generally available to one of ordinary skill in the art. See e.g., *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992).

Accordingly, even if all elements of a claim are disclosed in various prior art references, the claimed invention taken as a whole cannot be said to be obvious without

some reason given in the prior art why one of ordinary skill would have been prompted to modify the teachings of the references to arrive at the claimed invention. See e.g., *In re Regel*, 188 U.S.P.Q. 132 (C.C.P.A. 1975). Where no reasonable intrinsic or extrinsic justification exists for the proposed modification, a case of *prima facie* obviousness will not have been established.

In the present case, Nash, et al. expressly discloses securely embedding silica particles to the inside surface or donning layer of a glove. Col. 3, lines 18-20. The textured silicone inner surface made by the process of Nash, et al. includes forming an uncured coating of dispersion upon the surface of a hand-shaped mandrel. The dispersion comprises silicone elastomer dispersed in an organic solvent to which dispersion hydrophilic silica has been added. The hydrophilic silica accumulates on the outer surface of the uncured coating. Upon curing, the outer coating, a textured outer layer is formed on the hand-shaped glove. The hand-shaped glove is then peeled from the mandrel thereby inverting the glove. As such, the cured coating provides a textured inner surface for the hand-shaped glove. Col. 3, lines 31-41.

The teachings of Nash, et al. are directly opposite to those of the title of CS '117, which provides for colloidal silica coated on the external surface of the glove. Thus, Applicants respectfully submit that one seeking to modify the external surface coated with colloidal silica of the title of CS '117 would not be motivated to look to the techniques of treating the donning layer of Nash, et al.

B. Nash, et al. expressly teaches away from treating the outside surface of a glove with silica.

Furthermore, Nash, et al. expressly teaches away from the gloves claimed in independent claims 1, 12, 13, and 31. The Federal Circuit has several times expressly addressed the issue of how to evaluate an alleged case of *prima facie* obviousness to determine whether it has been properly made. For instance, “a *prima facie* case of obviousness can be rebutted if the applicant can show that the art in any material respect taught away from the claimed invention.” In re Haruna, 249 F.3d 1327, 1335 (Fed. Cir. 2001), citing In re Geisler, 116 F.3d 1465, 1469 (Fed. Cir. 1997).

A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. In re Gurley, 27 F.3d 551, 553 (Fed. Cir. 1994). Furthermore, a “prior art reference must be considered in its entirety, ie., as a whole, including portions that would lead away from the claimed invention.” M.P.E.P. 8th Ed., Rev. 2, §2141.02, citing W.L. Gore & Associates v Garlock, Inc., 721 F.2d 1540 (Fed. Cir. 1983).

As discussed above, Nash, et al. discloses coating silica particles only to the inner, donning layer of a glove. As such, Nash, et al. expressly teaches away from applying silica particles to the outer surface of a glove, as presently claimed in independent claims 1, 12, 13, and 31. Thus, Applicants respectfully submit that one of ordinary skill in the art, upon consideration of Nash, et al., would be motivated only to coat silica particles onto an inner surface of the glove.

Even if combined, absent any motivation or suggestion to do so, Nash, et al. states that the textured surface has a lowered coefficient of friction than a smooth surface which makes it easier for one to insert one's hand into the glove. As such, even if the silica particles are included in the external surface of the glove of the title of CS '117, Nash, et al. teaches embedding silica particles in the donning layer of a glove to lower the coefficient of friction. The teachings of Nash, et al. are directly opposite to the present invention, and therefore it is further believed that Nash, et al. teaches away from the presently pending claim 1. For example, the present application teaches that applying particles to the outside surface of an elastomeric article, such as a glove, improves the gripping properties of the glove. When viewing Nash, et al. as a whole, it is respectfully submitted that it would not have been obvious the title of CS '117 with Nash, et al. in arriving at the presently pending claim 1.

Applicants note that it is improper to use a patent applicant's own specification to provide the only suggestion for modifying the prior art. The Federal Circuit has repeatedly warned against using the Applicant's disclosure as a blueprint to reconstruct the claimed invention out of isolated teachings in the prior art. See Grain Processing Corp. v. American Maize-Products, 5 U.S.P.Q.2d 1788 (Fed. Cir. 1988). Thus, the mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 12 U.S.P.Q.2d 1780 (Fed. Cir. 1992).

Plainly, the Examiner's only incentive or motivation for so modifying CS '117 using the teachings of Nash, et al. in the manner suggested in the Final Office Action results from using Appellant's disclosure as a blueprint to reconstruct the claimed

invention out of isolated teachings in the prior art, which is improper under 35 U.S.C. § 103. Accordingly, it is respectfully submitted that any such modification of the cited references relies on the impermissible use of hindsight, which cannot be successfully used to support a *prima facie* case of obviousness.

Additionally, the title of CS '117 fails to disclose how the colloidal silica particles are attached to the natural or synthetic rubber. While the title of CS '117 does not specifically disclose that a separate binder material is present to affix the colloidal silica particles to the outside surface, the title of CS '117 fails to specifically exclude any separate binder material. In contrast, independent claims 1, 12, and 13 specifically require that no separate binder material affix the colloidal silica to the outside surface. In any event, Applicants respectfully submit that the title of CS '117 does not enable one of ordinary skill in the art to how coat the natural or synthetic rubber with colloidal silica particles without the use of a separate binder material.

As such, Appellants request that the independent claims, along with their dependent claims, be held allowable over the cited references.

II. Independent claims 13 and 31, along with dependent claims 8, 21, 32, and 34-36 are patentable over CS '117 in view of Nash, et al.

Applicants also submit that claims 8, 13, 21, 31, 32, and 34-36 are patentable over the cited references, in any combination. Nowhere do the cited references teach or suggest that the colloidal silica particles are electrically conductive. In fact, the Examiner had once allowed the claims requiring this limitation, stating that no applicable prior art teaches or suggests article or processes having the conductive features. Now, the Examiner has changed his mind and asserts that anything is electrically conductive

if enough voltage is applied. Office Action, pg. 2. Seemingly, the Office Action fails to give any weight to the limitation requiring the silica particles be electrically conductive.

Appellant notes that in order to establish *prima facie* obviousness, all of the claimed limitations must be taught or suggested in the prior art. See, e.g., MPEP § 2143.03. During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005) expressly recognized that the USPTO employs the "broadest reasonable interpretation" standard: The Patent and Trademark Office ("PTO") determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364[, 70 USPQ2d 1827] (Fed. Cir. 2004). The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. *In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999). See also, MPEP § 2111. Furthermore, the ordinary, simple English words whose meaning is clear and unquestionable, absent any indication that their use in a particular context changes their meaning, are construed to mean exactly what they say. *Chef America, Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1372 (Fed. Cir. 2004), and MPEP § 2111.01.

In the present case, the Office Action is gives an overly broad interpretation of the claimed requirement of "electrically conductive," so broad, in fact, that the Office Action essentially states that this limitation has no meaning. This overly broad claim interpretation does not amount to a "reasonable interpretation" that is "consistent with

the interpretation that those skilled in the art would reach.” Appellant submits that one of ordinary skill in the art would give some meaning to a limitation requiring silica particles to be electrically conductive, when they normally are not. In contrast, if the Office Action’s rejection is allowed to stand, then the Patent Office is essentially saying that any limitation requiring something – anything – to be “electrically conductive” has no meaning. Such an overly broad interpretation flies in the face of years of precedent in claim construction and interpretation principles. Thus, Appellant requests that the Board give meaning to this limitation, and allow claims 8, 13, 21, 31, 32, and 34-36.

In any event, neither of the cited references discusses the advantages of electrically conductive particles. According to the present application, the use of electrically conductive particles allows localized high levels of electrical charge, such as static charge or tribocharge, to be dissipated through conduction along particle-to-particle contacts. Pg. 8, lines 5-7. The cited references simply fail to teach, suggest, or even recognize the advantages of electrically conductive silica particles present in the articles. As such, Applicants respectfully submit that these claims are patentable over the cited references.

Thus, since none of the cited references teach or even suggest the use of an electrically conductive layer on an elastomeric glove, Applicants respectfully submit that *prima facie* obviousness has not been established. Accordingly, Applicants respectfully submit that claims 8, 13, 21, 31, 32, and 34-26 are patentable over the cited references, in any combination.

III. Claims 9 and 34 are patentable over CS ‘117 in view of Nash, et al. and in further view of Korklan, et al.

Claims 9 and 34 require that the colloidal silica particles further comprise a layer of aluminum chlorohydrate on the surface thereon. The Office Action admits that neither CS '117 nor Nash, et al. teaches such a coating, and thus attempts to combine the teachings of U.S. Patent No. 4,204,907 of Korklan, et al. However, Appellant respectfully submits that no suggestion or motivation exists to further combine the teachings of Korklan, et al. to those of CS '117 and Nash, et al.

Korklan, et al. is directed to a process for making an inorganic refractory insulation article by forming a fiber mat with a fiber slurry. The mat is impregnated with a conditioned colloidal silica composition comprising colloidal silica, acid, aluminum chlorohydrate, and water. See Abstract. The resulting finished inorganic refractory insulation article, which is usually an insulation board, comprises randomly oriented refractory fibers retained by drying colloidal silica uniformly throughout the article and from about 0.001 to about 1.5 wt. % of aluminum chlorohydrate. However, absolutely no teaching or suggestion exists that such a colloidal silica composition can be utilized as a coating on an elastomeric glove. The Office Action merely states that it would have been obvious to one of ordinary skill in the art at the time of the invention "to have provided aluminum chlorohydrates coated on colloidal silica in the gloves of CS '117 in order to control the application of colloidal silica as taught or suggested by Korklan, et al." Office Action, pg. 4 – pg. 5.

However, Applicant respectfully submits that one of ordinary skill in the art wishing to modify the gloves of either CS '117 or Nash, et al. would not be motivated to utilize a colloidal silica composition for use in insulation board. First of all, there is no teaching or suggestion that the colloidal silica composition of Korklan, et al. would, or

even could, meet the coating demands of an elastomeric article. In any event, there still exists no teaching or suggestion that such an aluminum chlorohydrate coating on a silica article would provide an electrically conductive coating as required by these claims. Thus, Appellant respectfully submits that these claims are additionally patentable over the cited references, either alone or in any combination.

In conclusion, Appellant requests favorable action and allowance of the presently pending claims.

Respectfully requested,

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8. CLAIMS APPENDIX

1. A surface-modified glove comprising:

an elastomeric matrix in the shape of a glove that receives a human hand therein, the matrix having an inside surface for contact with a human hand received within the glove and an outside surface; and

a plurality of colloidal silica particles adhered to at least a portion of the outside surface of the matrix and partially embedded therein without extending through the thickness of the matrix, wherein there is no separate binder material affixing the colloidal silica particles to the outside surface.

2. The surface-modified glove of claim 1, wherein the elastomeric matrix comprises natural latex.

3. The surface-modified glove of claim 1, wherein the elastomeric matrix comprises a synthetic elastomer.

4. The surface-modified glove of claim 1, wherein the elastomeric matrix comprises a nitrile rubber.

5. The surface-modified glove of claim 1, wherein the colloidal silica particles have a maximum dimension of from about 10 nanometers to about 100 nanometers.

6. The surface-modified glove of claim 1, wherein the colloidal silica particles are electrically conductive.

7. The surface-modified glove of claim 1, wherein the colloidal silica particles further comprise an electrically conductive surface treatment thereon.

8. The surface-modified glove of claim 1, wherein the colloidal silica particles further comprise a layer of an electrically conductive material on the surface thereof.

9. The surface-modified glove of claim 1, wherein the colloidal silica particles further comprise a layer of aluminum chlorohydrate on the surface thereon.

10. The surface-modified glove of claim 1, further including an inside surface treatment on the inside surface.

12. A surface-modified glove, comprising:
an elastomeric matrix having an outside surface; and
a plurality of colloidal silica particles adhered to at least a portion of the outside surface of the matrix without any separate binder material, said particles being partially embedded in said outside surface without extending through the thickness of the matrix.

13. A surface-modified glove, comprising:
an elastomeric matrix having a surface; and
a plurality of colloidal silica particles adhered to at least a portion of the surface of the matrix but not extending through the thickness of the matrix, the colloidal silica particles being affixed to the surface of the matrix without any separate binder material affixing the colloidal silica particles to the surface, wherein the colloidal silica particles are electrically conductive.

21. The surface-modified glove of claim 12, wherein the colloidal silica particles are electrically conductive.

31. A surface-modified glove comprising:
an elastomeric matrix in the shape of a glove adapted to receive a human hand therein, said elastomeric matrix having an inside surface for contact with a human hand received within the glove and an outside surface; and

a surface treatment adhered to at least a portion of the outside surface of said glove, said surface treatment comprising a plurality of colloidal silica particles adhered to and partially embedded in said outside surface of said glove, wherein said silica particles are electrically conductive.

32. A glove as defined in claim 31, wherein said silica particles have a maximum dimension of from about 10 nanometers to about 100 nanometers.

34. A glove as defined in claim 31, wherein the silica particles further comprise a layer of aluminum chlorohydrate on the surface thereon.

35. A glove as defined in claim 31, wherein said silica particles are adhered to said outside surface of said glove by a binder.

36. The surface-modified glove of claim 13, wherein the colloidal silica particles are partially embedded in the outside surface.

9. **EVIDENCE APPENDIX**

None

10. **RELATED PROCEEDINGS APPENDIX**

None